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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,682	03/30/2004	Randall L. Redman	006593-1970	4022
33375	7590	05/18/2005	EXAMINER	
THOMPSON HINE LLP 2000 COURTHOUSE PLAZA N.E. 10 WEST SECOND STREET DAYTON, OH 45402-1758			GHATT, DAVE A	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,682

Applicant(s)

REDMAN ET AL.

Examiner

Dave A. Ghatt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 16-22 is/are allowed.
6) ☒ Claim(s) 1-3, 8, 10-12, 14, 23 and 28 is/are rejected.
7) ☒ Claim(s) 4-7, 9, 13, 15 and 24-27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 3, 8, 10, 11, 14, 23, and 28, are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez et al. (US 5,997,192). As illustrated in Figure 1, Martinez et al. teaches a printer 10 for printing between a print roller 30 and a print head 16. Figure 2 shows a print head alignment system including a print roller assembly 6 having a print roller 30, mounted thereon and at least one stop 6B. Figure 2 also shows a print head support assembly 14 having a print head 16 mounted thereon. Figure 2 also shows at least one detent (the tip of element 7), a surface of said detent engaging a surface of said stop 6B to maintain alignment of said print head 16 with the print head roller 30. Figure 1 shows an actuating assembly (shaft 1) associated with the print head support assembly 14 and the print roller assembly 6 for movement thereof so as to back the stop 6B away from the detent (the tip of 7) before moving the print head support assembly 14 so as to provide an access space between the print head and the print roller for allowing print media to be removed and inserted.

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With respect to claim 2, Martinez et al. teaches the actuating assembly 1 connected to move the print head support assembly 14 and operates to back the detent (the tip of 7) off of the stop 6B before moving at least one side of the print head 16 away from the print roller 30 to provide the access space.

With respect to claim 3, as shown in Figure 1, Martinez et al. teaches the print head support assembly including a pivot frame (arm 14) pivotally attached toward one end to pivot about a pivot axis 17.

With respect to claim 8, Martinez et al. teaches a stop 12 located below a first side of said print head support assembly to limit downward movement of an inner side of the print head 16 away from the print roller 6 while an outer side of the print head moves to create the access space.

With respect to claim 10, as shown in Figure 2, as shown in Figure 2, Martinez et al. teaches the surface of the detent (tip of element 7) and the surface of the stop surface 6B are engaged in a manner that permits the print head 16 to float relative to the print roller 30 during operation when the surface of the detent moves along the surface of the stop.

With respect to claim 11, the print head support includes a biasing member 18 for urging the print head toward the print roller.

With respect to the method of claim 23, Martinez teaches a method in a printer, for disengaging a print head support assembly and a print roller assembly, wherein said print roller assembly includes at least one substantially vertical stop surface 6B engaged with at least one substantially vertical detent surface (the hook portion of element 7) of the print head support assembly (shown generally at 14) maintaining alignment of a print head 16 and a print roller 30. As shown in

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Figures 1-3, and as outlined in columns 3-4, the method comprises the step of (a) moving the print roller assembly in a first rotational direction to space said detent surface from said stop surface 6B. Figures 1-3 also show the steps of, after step (a), moving at least one side of the print head support assembly in a second direction (vertically downwards) away from the print roller assembly to provide an access space between the print head and the print roller for allowing print media to be removed and inserted.

With respect to claim 28, because Martinez et al. teaches the first direction being rotational and the second direction being vertically downwards, the first direction is substantially perpendicular to the second direction.

3. Claims 1, 12, and 14, are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al. (US 6,758,614). As illustrated in Figure 2, Yamada et al. teaches a printer 10 for printing between a print roller and a print head. Figure 6 shows a print head alignment system including a print roller assembly 22 having a print roller 18, mounted thereon and at least one stop 28. Figure 6 also shows a print head support assembly 21 having a print head 17 mounted thereon. Figure 12A-12C show at least one detent 30c, a surface of said detent engaging a surface of said stop to maintain alignment of said print head 17 with said print head roller 18. Figures 4, 13, and 14 show an actuating assembly (25, 26, 33) associated with the print head support assembly 21 and the print roller assembly 22 for movement thereof so as to back the stop 28 away from the detent 30c before moving the print roller assembly 22 so as to provide an access space between the print head and the print roller for allowing print media to be removed and inserted.

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With respect to claim 12, Yamada et al. teaches the print head support assembly having spaced apart lateral guide members 33 that interact with lateral guide portions 25b of the print roller assembly to orient the print head along an axis of the print roller.

With respect to claim 14 as shown in Figures 2 and 12A-12C, Yamada et al. teaches the actuating assembly connected to move the print roller assembly and operates to back said stop off of said detent before moving at least one side of the print roller away from the print head to provide the access space.

Allowable Subject Matter

4. Claims 4-7, 9, 13, 15, and 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the pivot frame includes two spaced apart wheels rotatably attached thereto.

Claim 9 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the print head is pivotally connected with said pivot frame to pivot about a second axis.

Claim 13 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the actuating member includes a movable cam surface that interacts with a lever.

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Claim 15 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the actuating member includes a movable cam surface that interacts with a lever.

Claim 24 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total method claimed, wherein step (a) involves moving a lever to pull a portion of the one of the print head support assembly and the print roller assembly.

5. Claims 16-22 are allowed.

Claim 16 is indicated as allowed because the prior art of record does not teach or render obvious the total combination claimed for print head alignment system having a print head elevator having two spaced apart rails for supporting said spaced apart wheels, each of said spaced apart rails including a respective ramp portion, said print head elevator being moveable relative to said pivot frame in a first direction causing said wheels to ride up said ramp portions to elevate said print head and heat sink and place said at least one detent into vertical alignment with said at least one stop.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave A. Ghatt whose telephone number is (571) 272-2165. The examiner can normally be reached on Mondays through Friday 8:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAG



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